

from Massachusetts to Philadelphia, Pa., with the passage of a low pressure storm of pronounced strength from the Lake region to the Saint Lawrence Valley, and on the 27th dense

fog prevailed from Massachusetts southward along the middle Atlantic coast with the passage of a low pressure storm from Pennsylvania east-northeast over New York and New England.

TEMPERATURE OF THE AIR (expressed in degrees, Fahrenheit).

The distribution of mean temperature over the United States and Canada for April, 1890, is exhibited on chart ii by dotted isotherms. In the table of miscellaneous meteorological data the monthly mean temperature and the departure from the normal are given for regular stations of the Signal Service. The figures opposite the names of the geographical districts in the columns for mean temperature and departure from the normal show, respectively, the averages for the several districts. The normal for any district may be found by adding the departure to the current mean when the departure is below the normal and subtracting when above. The monthly mean temperature for regular stations of the Signal Service represents the mean of the maximum and minimum temperatures.

The mean temperature for April, 1890, was highest in extreme southern Florida and in the lower Rio Grande valley, where it was above 75°, and the mean values were above 70° over the Florida Peninsula, along the immediate Gulf coast from the Mississippi River to Galveston, Tex., in the Rio Grande Valley east of the one hundred and fourth meridian, in the lower Gila valley, Arizona, and in the valley of the Colorado River northward to extreme southern Nevada. The mean readings were above 60° south of a line traced from east-central North Carolina irregularly westward to the southern part of the Panhandle of Texas, thence southwestward to southeastern New Mexico, thence westward to southeastern Arizona, and thence northwest to the lower valley of the San Joaquin River, California, in the interior of southern California, save along the immediate coast, and at Sacramento, Cal. The mean temperature was lowest at the more elevated stations in west-central Colorado, where it fell below 30°, and the mean values were below 35° in the lower Saint Lawrence valley, along the west coast of the Gulf of Saint Lawrence, and at stations on the north shore of Lake Superior. The mean readings were below 40° north of a line traced from extreme southeastern Maine irregularly westward to central lower Michigan, thence northwestward to southern Manitoba, and thence north of west over the British Possessions north of Montana. The mean temperature also fell below 40° in western Wyoming and the adjacent part of Idaho, in south-central Utah, and east-central Nevada.

The mean temperature was above the normal, save in parts of eastern New England and the Canadian Maritime Provinces, in the Florida Peninsula, from the Rio Grande Valley north-eastward to extreme western Tennessee and northward to eastern Colorado, along the immediate south and middle Pacific coasts, from the north Pacific coast and the Columbia Valley northeastward over the British Possessions north of Montana, and at Chicago, Ill. The greatest departures above the normal temperature were noted on the coast of east-central North Carolina, and within an area extending from Saint Vincent, Minn., to Bismarck, N. Dak., where they exceeded 5°, and the departures above the normal temperature were more than 3° within an area extending from central Pennsylvania to northeastern West Virginia, in north-central Ontario, from west-central Ohio westward to central Illinois, in northern upper Michigan, from north Dakota and western Minnesota southward over northwestern Iowa and the eastern part of the middle Missouri valley, and within a limited area in southeastern Arizona. The most marked departures below the normal temperature were reported on the north Pacific coast, where, at Tatoosh Island, Wash., seven years record, the mean temperature was more than 6° below the average for the month, and the departures below the normal equalled or exceeded 2° along the north Pacific coast, in the western Saskatchewan

valley, and from south-central Indian Territory southward to southeastern Texas.

The following are some of the most marked departures from the normal at the older established stations:

Above normal.		Below normal.	
	°		°
Bismarck, N. Dak.	5.8	Tatoosh Island, Wash.	6.2
Kitty Hawk, N. C.	5.8	Fort Sill, Ind. T.	2.2
Fort Thomas, Ariz.	3.6	Calgary, N. W. T.	2.0
Marquette, Mich.	3.2	Portland, Me.	1.9
New York City.	3.0	Key West, Fla.	1.8
Helena, Mont.	2.6	San Francisco, Cal.	1.2

At Kitty Hawk, N. C., sixteen years record, the mean temperature for the current month, 60° 8, was 1° 7 higher than the highest mean temperature previously reported for April, noted in 1878; at Des Moines, Iowa, twelve years record, the mean, 52° 8, was 0° 1 above the April mean of 1886; and at Omaha, Nebr., twenty years record, the mean, 55° 2, was 0° 6 above the highest previous April mean, noted in 1878.

DEVIATIONS FROM NORMAL TEMPERATURES.

The following table shows for certain stations, as reported by voluntary observers, (1) the normal temperature for April for a series of years; (2) the length of record during which the observations have been taken, and from which the normal has been computed; (3) the mean temperature for April, 1890; (4) the departure of the current month from the normal; (5) and the extreme monthly means for April, during the period of observation and the years of occurrence:

State and station.	County.	(1) Normal for the month of April.	(2) Length of record.	(3) Mean for April, 1890.	(4) Departure from normal.	(5) Extreme monthly mean temperature for April.			
						Highest.	Year.	Lowest.	Year.
<i>Arkansas.</i>		°	Years	°	°	°		°	
Lead Hill	Boone	62.0	8	62.4	+ 0.4	65.3	1888	56.7	1884
<i>California.</i>									
Sacramento	Sacramento	59.3	37	55.3	- 4.0	63.3	1857	54.6	1860
<i>Connecticut.</i>									
Middletown	Middlesex	45.5	23	46.9	+ 1.4	50.9	1865	38.3	1874
<i>Florida.</i>									
Merritt's Island	Brevard	68.1	7	73.4	+ 5.3	74.9	1885	60.0	1889
<i>Georgia.</i>									
Forsyth	Monroe	64.9	16	66.7	+ 1.8	68.8	1888	61.0	1875
<i>Illinois.</i>									
Peoria	Peoria	52.4	34	55.8	+ 3.4	57.9	1878	40.6	1857
Riley	McHenry	44.6	34	46.0	+ 1.4	52.2	1856	35.5	1874
<i>Indiana.</i>									
Vevay	Switzerland	55.0	23	56.6	+ 1.6	60.5	1866	47.4	1874
<i>Iowa.</i>									
Cresco	Howard	43.0	18	47.3	+ 4.3	47.3	1878	37.5	1874
Monticello	Jones	48.2	36	50.9	+ 2.7	56.0	1855	38.0	1857
Logan	Harrison	50.2	16	56.2	+ 6.0	56.2	1890	42.6	1874
<i>Kansas.</i>									
Lawrence	Douglas	54.5	22	56.6	+ 2.1	59.6	1876	47.7	1874
<i>Louisiana.</i>									
Grand Coteau	Saint Landry	69.7	7	70.0	+ 0.3	70.9	1885	68.6	1884
<i>Maine.</i>									
Orono	Penobscot	39.8	20	40.2	+ 0.4	45.1	1889	33.3	1874
<i>Maryland.</i>									
Cumberland	Allegany	48.7	31	51.8	+ 3.1	57.6	1881	42.2	1859
<i>Massachusetts.</i>									
Amherst	Hampshire	45.4	54	46.6	+ 1.2	52.2	1839, '78	38.3	1874
Newburyport	Essex	43.9	10	44.9	+ 1.0	47.5	1886	41.4	1888
Somerset	Bristol	45.2	17	47.5	+ 2.3	51.8	1878	38.7	1874
<i>Michigan.</i>									
Kalamazoo	Kalamazoo	46.7	13	49.4	+ 2.7	52.9	1878	42.0	1881
Thornville	Lapeer	45.6	13	46.0	+ 0.4	52.1	1878	42.3	1881, '88
<i>Minnesota.</i>									
Minneapolis	Hennepin	43.3	24	47.5	+ 4.2	49.2	1886	36.6	1874
<i>Montana.</i>									
Fort Shaw	Lewis & Clarke	44.7	20	45.3	+ 0.6	51.2	1870	38.6	1882
<i>New Hampshire.</i>									
Hanover	Grafton	41.2	55	41.5	+ 0.3	46.9	1887	33.7	1874
<i>New Jersey.</i>									
Moorestown	Burlington	49.3	26	49.7	+ 0.4	55.1	1865	42.3	1874
South Orange	Essex	47.6	19	49.0	+ 1.4	52.9	1878	42.2	1874

Deviations from normal temperatures—Continued.

State and station.	County.	(1) Normal for the month of April.	(2) Length of record.	(3) Mean for April, 1890.	(4) Departure from normal.	(5) Extreme monthly mean temperature for April.			
						Highest.	Year.	Lowest.	Year.
<i>New York.</i>		0	Years	0	0	0		0	
Cooperstown....	Otsego.....	40.7	36	42.8	+ 2.1	51.6	1878	33.6	1874
Palermo.....	Oswego.....	41.0	30	43.3	+ 2.2	50.0	1878	32.4	1874
<i>North Carolina.</i>									
Lenoir.....	Caldwell.....	55.6	17	57.8	+ 2.2	60.0	1887	42.6	1885
<i>Ohio.</i>									
N'th Lewisburgh.	Champaign..	50.9	58	53.9	+ 3.0	63.0	1888	39.0	1857
Wauseon.....	Fulton.....	46.3	20	48.6	+ 2.3	54.8	1878	38.6	1874
<i>Oregon.</i>									
Albany.....	Linn.....	51.8	12	49.8	- 2.0	55.4	1888	48.4	1882
Eola.....	Polk.....	49.5	19	49.0	- 0.5	54.8	1875	43.2	1872
<i>Pennsylvania.</i>									
Dyberry.....	Wayne.....	42.0	24	43.4	+ 1.4	49.7	1878	35.0	1874
Grampian hills.	Clearfield....	43.2	25	46.8	+ 3.6	52.2	1878	29.0	1875
Wellaborough.	Tioga.....	43.7	11	44.7	+ 1.0	52.0	1886	40.1	1881
<i>South Carolina.</i>									
Statesburgh....	Sumter.....	62.3	9	62.7	+ 0.4	64.6	1882	60.1	1884
<i>Tennessee.</i>									
Austin.....	Wilson.....	59.0	20	61.8	+ 2.8	65.3	1878	53.9	1874
Milan.....	Gibson.....	60.0	7	60.4	+ 0.4	63.3	1888	56.2	1884
<i>Texas.</i>									
New Ulm.....	Austin.....	68.6	17	68.1	- 0.5	71.5	1878, '80	63.6	1874
<i>Vermont.</i>									
Strafford.....	Orange.....	40.6	17	41.5	+ 0.9	48.3	1886	34.9	1874
<i>Virginia.</i>									
Birdnest.....	Northampton	54.5	22	55.6	+ 1.1	61.6	1880	49.4	1875
<i>Wisconsin.</i>									
Madison.....	Dane.....	44.4	22	47.0	+ 2.6	49.8	1870	37.4	1874
<i>Washington.</i>									
Fort Townsend..	Jefferson....	48.7	16	50.8	+ 2.1	52.4	1889	36.2	1859

MAXIMUM AND MINIMUM TEMPERATURES.

The highest temperature reported by a regular station of the Signal Service was 98°, at Yuma, Ariz., on the 28th. The maximum temperature rose above 90° over the central part of the Florida Peninsula, within an area extending from the middle Rio Grande valley east of north over eastern Kansas, and from the Gila Valley northwestward over southern and south-central California. The maximum temperature rose to or above 80° over eastern Pennsylvania and in the Atlantic coast states to the southward, in the Gulf States, in the western Mississippi valley, in the Missouri Valley, along the eastern slope of the Rocky Mountains, over the western parts of the northern and southern plateau regions, and on the Pacific coast, save along and near the coast line north of the thirty-eighth parallel. The lowest maximum temperature reported was 58° at Wood's Holl and Nantucket, Mass., and the maximum values were below 70° along the Maine, southeastern Massachusetts, and Rhode Island coasts, at Buffalo, N. Y., at Lake Superior stations, and along the immediate Pacific coast north of the thirty-eighth parallel. At stations in the south Atlantic states, the upper Mississippi and Missouri valleys, on the northeastern slope of the Rocky Mountains, the northern plateau region, and along the north Pacific coast the maximum temperature for the current month was as high or higher than previously reported for April. At Charleston, S. C., twenty years record, the maximum temperature, 88°, was the same as the maximum of 1888; at Springfield, Ill., eleven years record, 85°, 1° above maximum of 1887; Saint Louis, Mo., twenty years record, 89°, 1° above maximum of 1888; Leavenworth, Kans., nineteen years record, 90°, 1° above maximum of two or more years; Helena, Mont., eleven years record, 78°, the same as maximum of 1888; Spokane Falls, Wash., ten years record, 86°, the same as maximum of 1887; Walla Walla, Wash., five years record, 89°, 4° above maximum of 1888; Portland, Oregon, nineteen years record, 85°, the same as maximum of 1880; and Roseburgh, Oregon, thirteen years record, 86°, 2° above maximum of 1880. In April of preceding years the highest absolute temperature has generally been reported in the middle and south Atlantic states, the northern plateau region, and the middle and south Pacific coasts in 1888; in the extreme northwest in 1887; in the west Gulf states in 1880 or 1887; on the northeastern slope of the Rocky Mountains in 1887 or 1888; over the southern plateau region in 1879 or 1889; over the mid-

dle plateau region in 1888 or 1889; and along the north Pacific coast in 1880 or 1885; elsewhere the periods of occurrence were irregular. The reports of United States Army post surgeons and state weather service and voluntary observers show the following maximum temperatures in states and territories where temperature was reported 80° or above: Gove City, Kans., 105°; Fort Ringgold and Camp del Rio, Tex., 101°; Forts McDowell and Mojave, Ariz., 98°; El Dorado, Nev., 96°; Alva, Fla., 95°; Millen, Ga., Caddo Creek, Ind. T., and Wilcox, Nebr., 94°; Lead Hill, Ark., Riverside, Cal., Columbus, Miss., and Centerville, Mo., 93°; Mascoutah, Ill., and Bowling Green, Ky., 92°; Hardeeville, S. C., 91°; Fort Selden, N. Mex., 90°; Pendleton, Oregon, Aberdeen and Fort Bennett, S. Dak., Wiggins, Ala., Lewiston, Idaho, and at several stations in Louisiana, 89°; Lamar, Colo., Glenwood, Iowa, Chapel Hill and Washington, N. C., Steele and Wahpeton, N. Dak., Maryville, Tenn., Alexandria and Richmond, Va., 88°; Ligonier, Pa., 87°; Readington, N. J., and Portsmouth, Ohio, 86°; Marengo, Ind., Frederick, Md., and Vancouver Barracks, Wash., 85°; Fort Keogh and Powder River, Mont., Fort Wadsworth and Geneva, N. Y., and Beaver, Utah, 84°; at several stations in Minnesota, 83°; Oceana, W. Va., 82°; Ludlow and Somerset, Mass., 81°; Hartford, Conn., Neillsville, Wis., and Fort D. A. Russell, Wyo., 80°.

The lowest temperature reported by a regular station of the Signal Service was 3°, at Sault de Ste. Marie, Mich., on the 1st. The minimum temperature fell to or below 10° in the eastern part of upper Michigan, in the upper valley of the Red River of the North, and in southwestern South Dakota and central Wyoming, and the minimum values were below 20° north of a line traced from central New Hampshire and Vermont westward, north of the lower lakes to south-central Michigan, thence northwestward to central Wisconsin, thence southwestward to southern Nebraska, thence westward to east-central Colorado, thence southward to southern New Mexico, thence northward to west-central Colorado, thence northwestward to west-central Idaho, thence southwest to northwestern Nevada, and east of this line continued northward to central Oregon, and thence northeastward over western Montana. At stations on the eastern slope of the Rocky Mountains, in the southern and northern plateau regions, and on the north Pacific coast the minimum temperature for the current month was as low or lower than previously reported for April. At Fort Washakie, Wyo., five years record, the minimum temperature, 6°, was 5° below the minimum of 1883; Colorado Springs, Colo., six years record, 16°, 10° below minimum of 1889; Fort Stanton, N. Mex., seven years record, 14°, 4° below minimum of 1884; Lava, N. Mex., six years record, 27°, 3° below minimum of two or more years; Spokane Falls, Wash., ten years record, 22°, 4° below minimum of 1881; Walla Walla, Wash., five years record, 29°, the same as minimum of 1887; Fort Canby, Wash., seven years record, 35°, 1° below minimum of 1887; Neah Bay, Wash., six years record, 28°, 3° below minimum of two or more years; Port Angeles, Wash., seven years record, 28°, 1° below minimum of 1887; Astoria, Oregon, seven years record, 32°, 2° below minimum of 1886, and Roseburgh, Oregon, thirteen years record, 26°, 2° below minimum of 1887. In April of preceding years the lowest temperature has generally been reported in the middle and south Atlantic states, the northern plateau region, and the middle and south Pacific coasts in 1888; in the east Gulf states in 1887 or 1888; in the west Gulf states and the extreme northwest in 1887; in the Ohio Valley and Tennessee in 1883 or 1887; over the southern plateau region in 1879 or 1889; over the northern plateau region in 1888 or 1889; and on the north Pacific coast in 1880 or 1885; elsewhere the periods of occurrence were irregular. The reports of the United States Army post surgeons and state weather service and voluntary observers show the following minimum temperatures in states and territories where the temperature fell to or below 20°: Pokegama Falls, Minn., -17°; Climax, Colo., -3°; Fort Brady, Mich., -2°; Fort Logan, Mont., zero; Wesley, Iowa, 2°;

Steele, N. Dak., 3°; Summit Lake, Wis., and Soda Springs, Idaho, 4°; Fort Union, N. Mex., Sherman, N. Y., and Camp Sheridan, Wyo., 5°; West Milan, N. H., and Fort Meade, S. Dak., 6°; Fort Niobrara, Nebr., 7°; Ruby Hill, Nev., 8°; East Berkshire, Vt., 9°; Silver Lake, Oregon, and Hartley, Tex., 10°; Nephi, Utah, 11°; Monson, Mass., and several stations in Pennsylvania, 12°; Sycamore, Ill., 15°; Garrettsville, Ohio, and Mayfield Me., 17°; New Hartford, Conn., 19°; Fort Bidwell, Cal., Delphi and Sunman, Ind., Hoxie and Leoti, Kans., Christiansburgh and Mossingford, Va., and Tannery, W. Va., 20°.

○ LIMITS OF FREEZING WEATHER.

The southern limit of freezing weather for April, 1890, is shown on chart iv by a line traced from the coast of east-central Virginia southwestward to central North Carolina, thence to southern Indiana, thence to southeastern Kansas, thence to extreme southwestern Texas, and thence to extreme southeastern Arizona. The western limit of freezing weather is shown by a line traced irregularly northwestward from southeastern Arizona to southwestern Oregon, and thence northward along or near the coast line to southwestern Washington. Compared with the limits of freezing weather for March, 1890, the line showing the southern limit of freezing weather for the current month is about nine degrees farther north on the Atlantic coast, and about seven degrees farther north in the Mississippi Valley. In March the limit of freezing weather extended south of the region of observation from the Mississippi River to the middle Gila valley, Arizona, while for the current month the minimum temperature was above freezing northward to southern Missouri and southeastern Kansas, and generally over Texas east of the one hundredth meridian. Over the southern plateau region the limit of freezing weather is somewhat farther north, and on the north Pacific coast is farther east than for the preceding month.

In April, 1889, the southern limit of freezing weather was shown by a line traced from near Boston, Mass., irregularly southwestward to central North Carolina, thence north of west to southwestern Iowa, and thence irregularly southwestward to southern New Mexico; the western limit was shown by a line traced from southern New Mexico northwestward to west-central Oregon, thence eastward over the valley of the Columbia River and thence northward into British Columbia.

○ RANGES OF TEMPERATURE.

The greatest and least daily ranges of temperature at regular stations of the Signal Service are given in the table of miscellaneous meteorological data. The greatest monthly ranges of temperature occurred within an area extending from western Minnesota and northwestern Iowa westward over parts of North and South Dakota, where they exceeded 70°, whence they decreased eastward to less than 30° on the coast of extreme southeastern Massachusetts, southeastward to less than 20° over extreme southern Florida, southward to less than 30° on the west Gulf coast, southwestward to 40° on the extreme south Pacific coast, and westward to less than 30° on the coast of northern California and southwestern Washington.

The following are some of the extreme monthly ranges:

○ Greatest.		Least.
Sioux City, Iowa	75.0	Key West, Fla. 17.0
Escanaba, Mich.	68.0	Port Eads, La. 24.0
Fort Washakie, Wyo.	66.0	Point Reyes Light, Cal. 26.0
Spokane Falls, Wash.	64.0	Nantucket, Mass. 28.0
Dodge City, Kans.	64.0	Fort Canby, Wash. 29.0

○ FROST.

The following is a summary of reports of damaging frost made by regular and voluntary observers of the Signal Service: on the 1st, 2d, 19th, and 20th ice formed in all parts of New Jersey and the peach crop was damaged, especially by the freezing weather of the 1st and 2d. On the 10th light frost damaged delicate plants at Little Rock, Ark. On the 11th and 12th frost injured the peach crop in Oregon. On the 11th

and 21st frost damaged crops, vegetables, and fruit in South Carolina. On the 12th and 13th about one-third of the buds of raisin vines in the neighborhood of Fresno, Cal., were killed by cold; on heavy, damp soil the destruction was light, but on high rolling soil it was great. On the 20th frost damaged young fruit trees at Dale Enterprise, Va., and killed tender plants at Spottsville and Nottaway C. H., Va.

The killing frost in New Jersey was about one week later, in Virginia two to three weeks later, in South Carolina three to four weeks later, and in Arkansas about three weeks later than the average date of last killing frost.

East of the Mississippi River and south of the fortieth parallel frost was reported most frequently in Maryland, where it was noted for sixteen dates; in Virginia and Indiana for fourteen dates; in Ohio for thirteen dates; in West Virginia for twelve dates; in New Jersey and North Carolina for ten dates; in South Carolina and Tennessee for eight dates; in Illinois for seven dates; in the District of Columbia, Georgia, and Kentucky for four dates; and in Alabama and Mississippi for two dates; in states other than those named lying south of the fortieth parallel no frost was reported. Between the Mississippi River and the Rocky Mountains and south of the fortieth parallel frost was reported most frequently in Texas, where it was noted for nineteen dates; in Colorado for sixteen dates; in Kansas for thirteen dates; in Missouri for six dates; in Louisiana for two dates; and in Indian Territory and Arkansas for one date. In the plateau region south of the fortieth parallel frost was reported for eighteen dates in Utah; for thirteen dates in Nevada; for ten dates in New Mexico; and for six dates in Arizona. On the Pacific coast frost was reported for thirteen dates in Washington; for twelve dates in Oregon; for six dates in northern California; and for five dates in southern California.

East of the Rocky Mountains and south of the fortieth parallel frost was reported in thirteen states on the 21st; in eleven states on the 11th and 20th; in ten states on the 19th; in nine states on the 6th; in eight states on the 1st, 2d, 10th, and 28th; in seven states on the 22d; in six states on the 12th; and in one to five states, inclusive, on the 3d, 5th, 7th, 8th, 9th, 14th, 16th, 17th, 18th, 27th, 29th, and 30th. Between the Mississippi River and the Rocky Mountains and south of the fortieth parallel frost was reported in six states on the 10th; in four states on the 1st, 17th, 18th, and 27th; in three states on the 2d, 4th, 9th, 22d, and 23d; in two states on the 3d, 16th, 20th, 25th, 26th, 28th, and 30th; and in one state on the 11th, 15th, 19th, 21st, 24th, and 29th. In the plateau region south of the fortieth parallel frost was reported in four states or territories on the 1st and 2d; in three on the 26th; in two on the 3d, 7th, 8th, 10th, 13th to 16th, 21st, 22d, 23d, and 25th; and in one on the 4th to 6th, 9th, 12th, 17th, 18th, 20th, 24th, and 30th. In Washington frost was reported on the 1st to 5th, 8th, 11th to 15th, 19th, and 21st. In Oregon on the 1st to 3d, 8th, 9th, 11th to 15th, 21st, and 23d. In northern California on the 8th, 12th to 15th, and 22d. In southern California on the 1st, 2d, 13th, 14th, and 15th.

○ TEMPERATURE OF WATER.

The following table shows the maximum, minimum, and mean water temperature as observed at the harbors of the several stations; the monthly range of water temperature; and the mean temperature of the air for April, 1890:

Stations.	Temperature at bottom.				Mean temperature of air at the station.
	Max.	Min.	Range.	Monthly mean.	
Boston, Mass.	50.0	39.7	10.3	44.4	46.3
Canby, Fort, Wash.	59.8	47.8	12.0	51.1	47.0
Charleston, S. C.	70.5	58.0	12.5	65.3	64.8
Eastport, Me.	40.2	36.9	3.3	38.1	39.2
Galveston, Tex.	75.5	68.5	7.0	71.9	69.8
Key West, Fla.	82.1	73.8	8.3	78.4	75.2
Portland, Oregon.	53.7	46.0	7.7	49.2	52.4